Please amend the claims as follows:

1. (original) A method of producing an object data set describing a straightened reformat from an original object data set containing an elongate subject, from which an initial cross sectional slice is created transverse to the elongate subject and at least one further cross sectional slice is created transverse to the elongate subject, characterized in that, a reference direction is determined in each cross sectional slice, the object data set is created by concatenating the cross sectional slices, each cross sectional slice orientated so that the reference directions in the cross sectional slices are aligned.

2. (original) A method as in claim 1, characterized in that the determination of the reference direction in each cross sectional slice comprises the method of determining an initial reference direction in the initial cross sectional slice, deriving the reference directions in the at least one further cross sectional slices from the initial reference direction by propagation.

3. (original) A method as in claim 2, characterized in that the determined initial reference direction is propagated directly into each of the at least one further slices.

4. (original) A method as in claim 2, characterized in that the initial and the at least one further cross sectional slices form a consecution of successive cross sectional slices and the reference direction in each cross sectional slice in the at least one further cross sectional slices is derived from the reference direction in the preceding slice by propagation.

5. (original) A method as in claim 1, characterized in that the determination of the reference direction in each cross sectional slice comprises the method of determining a first reference direction in a first cross sectional slice, independently determining a final reference direction in a final cross sectional slice, so that there is at least one intervening cross sectional slice between the first and the final cross sectional slices, deriving the reference directions in the intervening cross sectional slices by optimizing the change of reference direction throughout the intervening cross sectional slices while using the first and final reference directions in the first and final cross sectional slices as boundary conditions.

6. (original)   An optimization of the change of reference direction as in claim 5, characterized in that, the change in relative orientation between any two consecutive reference directions from the first reference direction in the first cross sectional slice to the final reference direction in the final cross sectional slice is minimized.

7. (original)   A method as in claim 5, characterized in that, An additional cross sectional slice is chosen from the group of at least one intervening cross sectional slices between the first and the final cross sectional slices, an additional reference direction is determined in the additional cross sectional slice, the reference directions in the intervening cross sectional slices between the first and the additional cross sectional slice and between the additional and the final cross sectional slices are derived by optimizing the change of reference direction throughout the cross sectional slices while using the first, additional and final reference directions as boundary conditions.

8. (original)   A method as in claim 1, characterized in that the cross sectional slices are aligned within the object data set describing the straightened reformat in such a way that their

reference directions are at the same angular orientation within the object data set.

9. (currently amended) The display of an object data set created according to ~~any of the previous claims~~claim 1.

10. (original) A computer program, containing instructions for the production of a straightened reformat from successive cross sectional slices from within an object data set, characterized in that, the computer program further contains instructions for a reference direction to be determined within each cross sectional slice, and further instructions for the cross sectional slices to be aligned by alignment of the individual reference directions.

11. (original) A workstation, configured for the purposes of producing, displaying and using images and containing instructions for the production of a straightened reformat from successive cross sectional slices from within an object data set, characterized in that the workstation further includes instructions for a reference direction to be determined within each cross sectional slice, and further instructions for the cross sectional slices to be aligned by alignment of the individual reference directions.